

## **REMARKS**

Applicant expresses appreciation to the Examiner for consideration of the subject patent application. This amendment is in response to the final office action mailed November 30, 2004. Claims 1-25 were pending and claims 1-25 were rejected. Claims 1-25 have not been amended and remain in the application as originally presented.

### **35 U.S.C. § 102(b) Anticipation Rejections**

The Examiner has rejected Claims 1-5, 8-17, 19-25 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,557,596 (Gibson 596). 35 U.S.C. § 102(b) requires that:

“a person shall be entitled to a patent, unless . . . (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States . . .” M.P.E.P. 706.02 sets forth the standard for a § 102(b) rejection:

“For anticipation under 35 USC 102, the reference must teach every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught must be inherently present.”

It should be noted that the Gibson 596 patent was cited and distinguished in the present application. The Gibson 596 patent focused on using electron emitters generating beams of electrons in a data storage system to impact and change the state of storage material, which would then be detected in a carrier flow in any of several different detection devices described therein. The Gibson 596 patent did not disclose or teach the use of light beam emitters for such a data storage system.

The final office action indicates that there is no patentable distinction between the use of a light beam (as claimed) and the use of an electron beam (as cited in the prior art). Applicant respectfully submits that there is a patentable difference between the use of a light beam and an electron beam. Several limitations arise with the use of electron beams, including dielectric breakdown, field emission from undesirable locations and the need for relatively large and expensive power supplies. As stated on page 3 of the present application:

“It is possible to use low energy electrons in this technique to avoid problems with dielectric breakdown, field emission from undesirable locations, and the need for relatively large and expensive power supplies. However, low energy electrons have very short penetration depths, making this approach highly susceptible to the surface

conditions of the medium. Moreover, only very thin layers may be present on the top of the storage media, making difficult the use of a protective layer or a conducting electrode on top of the storage layer. In addition, the stability and cyclability of a storage device using electron-readback may be limited by the mechanical and thermal properties of the free surface of the storage medium. Only very thin protective cladding layers can be used with a low-energy electron-beam addressing scheme, as these layers would prevent access by low energy electrons.”

The present invention utilizes light beam emitters, rather than electron emitters, to overcome some of these limitations. For example, as stated on page 5 of the subject application:

“The use of light for reading and writing, having much greater penetration depth than electron beams, enables the use of deeper storage layers, as well as protective layers over the storage layers. Optically-transparent electrodes may be placed on top of the storage layer.”

It can be seen that all of claims 1-25 are limited to the use of light beam emitters, a substantial difference from the disclosure in the Gibson 596 patent. In independent claims 1 and 15, one of the elements is “an array of directed light beam emitters” that are used to direct light beams to a medium on a data storage layer for storing and detecting the presence of data. Likewise, in independent method claim 20, the method involves changing states in a medium on a data storage layer “in response to light beam energy” by “directing a first light beam to the medium to write data” and by “directing a second light beam to the medium on the data storage areas to read data.” The other claims are dependent on the foregoing independent claims and are therefore likewise limited to the use of light beam emitters, not electron beam emitters.

In contrast, the Gibson 596 patent is limited in its disclosure to the use of electron beams. The Gibson 596 patent fails to teach the use of light beam emitters, including the use of light beam emitters in the context of a data storage system shown in the present application. Accordingly, it is submitted that the Gibson 596 patent may not be used as an anticipation of claims 1-5, 8-17, 19-25 of the present application. Therefore, Applicant respectfully submits that claims 1-5, 8-17, 19-25 are allowable, and urges the Examiner to withdraw the rejection.

**35 U.S.C. § 102(e) Anticipation Rejections**

The Examiner has rejected Claims 1-25 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,473,388 (Gibson 388). 35 U.S.C. § 102(e) requires that:

“a person shall be entitled to a patent, unless . . . (e) the invention was described in . . . (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent. . . .”

M.P.E.P. 706.02(b) states that one may overcome a § 102(e) rejection by “filing an affidavit or declaration under 37 CFR 1.131 showing prior invention.”

Attached hereto are declarations of both inventors, Gary A. Gibson and Alison Chaiken, under Rule 131, both stating that the invention as described and claimed in the subject patent application was conceived and reduced to practice prior to August 31, 2000, the filing date of the Gibson 388 patent, together with an accompanying exhibit. Accordingly, it is submitted that the Gibson 388 patent has been removed as a reference against the claims of the present application, and claims 1-25 are allowable over the Gibson 388 patent reference.

## CONCLUSION

In light of the above, Applicant respectfully submits that pending claims 1-25 are now in condition for allowance. Therefore, Applicant requests that the current rejection be withdrawn, and that the claims be allowed and passed to issue. If any impediment to the allowance of these claims remains after entry of this Amendment, the Examiner is strongly encouraged to call Vaughn North at (801) 566-6633 so that such matters may be resolved as expeditiously as possible.

The Commissioner is hereby authorized to charge any additional fee or to credit any overpayment in connection with this Amendment to Deposit Account No. 08-2025.

DATED this 31<sup>st</sup> day of January, 2005.

Respectfully submitted,



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